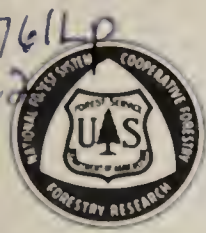


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U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE FOREST PRODUCTS LABORATORY MADISON, WIS.

In Cooperation with the University of Wisconsin

LIST OF PUBLICATIONS ON WOOD FIBER RESEARCH

This list includes publications that present the results of research by the Forest Products Laboratory in this particular field of wood products research.

Single copies of the various items may be obtained free upon request from the Director, Forest Products Laboratory, Post Office Box 5130, Madison, WI 53705. Classroom quantities are not available because of limited printing and storage facilities.

Title	Author	Publication and date
*Effects of wood and pulp properties on medium-density dry-formed hardboard.	:Nelson, N. D.	:Forest Prod. J. 23(9): 72-80. Sept. 1973.
*A method for studying the stiffness and internal friction of individual fibers.	:James, W. L.	:Wood Sci. 6(1): 30-38. July 1973.
Economics of kraft pulping of unbarked wood.	:Auchter, R. A. & :Horn, R. A.	:Pap. Trade J.: 38,39. June 25, 1973.
*Small-angle X-ray scattering by paper: a new method for investigating inter-fiber bonding.	:Caulfield, D. F.	:Tappi 56(3): 102-106. Mar. 1973.
*The role of phenolic resin in imparting properties to dry-formed hardboards.	:Fahey, D. J. & :Pierce, D. S.	:Tappi 56(3): 53-56. Mar. 1973.

Highly technical publications are marked with an asterisk (*).

Title	Author	Publication and date
Kraft pulps and hardboards from short-rotation sycamores.	Laundrie, J. F. & Fahey, D. J.	Pap. Trade J.: 26,27. Feb. 12, 1973.
Dry methods of separating plastic films from waste paper.	Laundrie, J. F. & Klungness, J. H.	Pap. Trade J.: 34-36. Feb. 5, 1973.
Pulping without barking increases fiber yield.	Auchter, R. J.	Forest Prod. Lab. Madison, Wis. 1972.
Trends and prospects for use in fiber products.	Auchter, R. J.	USDA Forest Serv. Gen. Tech. Rep. NC-1, Aspen Symp. Proc: 40-44. 1972.
*Developing a hypothesis: Native cellulose elementary fibrils are formed with metastable structure.	Stöckmann, V. E.	Biopolymers Vol. 11: 251-270. 1972.
*High yields of kraft pulp from rapid-growth hybrid poplar trees.	Laundrie, J. F. & Berbee, J. G.	USDA Forest Serv. Res. Pap. FPL 186. 1972.
Effect of relative humidity changes on compressive creep response of paper.	Byrd, V. L.	Tappi 55(11): 1612-1613. Nov. 1972.
*Kraft pulping of pulpwood chips containing bark.	Horn, R. A. & Auchter, R. J.	Pap. Trade J.: 55-59. Nov. 6, 1972.
How fiber morphology affects pulp characteristics and properties of paper.	Horn, R. A.	Chem 26 Pap. Processing: 39-44. May 1972.
Effect of relative humidity changes during creep on hand-sheet paper properties.	Byrd, V. L.	Tappi 55(2): 247-252. Feb. 1972.
*A practical method for recycling wax-treated corrugated.	Mohaupt, A. A. & Koning, J. W., Jr.	Boxboard Containers: 60-62. Jan. 1972.
*Oxygen/alkali oxidation of cellulose and model alcohols and the inhibition by iodide.	Minor, J. L. & Sanyer, N.	J. Polymer Sci.: Part C No. 36, 73-84. 1971.

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Title	Author	Publication and date
*Elementary cellulose fibrils possess an entropic deformation mechanism.	:Stöckmann, V. E.	:J. Polymer Sci.: Part C No. 36, 363-381. 1971.
Household separation of waste-paper: FPL employee survey.	:Myers, G. C.	:USDA Forest Serv. Res. Pap. FPL 159. 1971.
Effect of manufacturing variables on stability and strength of wet-formed hardboards.	:Steinmetz, P. E. & Fahey, D. J.	:USDA Forest Serv. Res. Pap. FPL 159. 1971.
Semi-automated recording of wood cell dimensions.	:Hiller, C. H., :Lewis, D. W., & :Wengert, E. M.	:Tappi 54(2): 255-256. 1971.
*Effect of pulping on cellulose structure. Part I. A hypothesis of transformation of fibrils.	:Stöckmann, V. E.	:Tappi 54(12): 2033-2037. Dec. 1971.
*Effect of pulping on cellulose structure. Part II. Fibrils contract longitudinally.	:Stöckmann, V. E.	:Tappi 54(12): 2038-2045. Dec. 1971.
*Predicting flexural stiffness of corrugated fiberboard.	:Koning, J. W., Jr. & Moody, R. C.	:Tappi 54(11): 1879-1881. Nov. 1971.
*Resistance of resin-impregnated paper overlays to accelerated weathering.	:Fahey, D. J. & Pierce, D. S.	:Forest Prod. J. 21(11): 30-38. Nov. 1971.
The effects of humidity on paper.	:Byrd, V. L.	:Chem 26 Pap. Processing 7(11): 30-35. Nov. 1971.
Testing paper for easy printing.	:Levy, W.	:Reproductions Review & Methods: 28-31. Oct. 1971.
Future wood needs for paper-making fibers should not be a problem.	:Auchter, R. J.	:Pap. Trade J. 155(34): 58-61. Aug. 1971.
What's in the wastepaper fiber collected from municipal trash.	:Myers, G. C.	:Pap. Trade J.: 32-35. Aug. 30, 1971.

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Title	Author	Publication and date
Many problems involved in increasing utilization of waste paper.	Carr, W. F.	Pap. Trade J.: 48-52. May 1971.
*Effects of relative humidity and temperature on tensile stress-stain properties of kraft linerboard.	Benson, R. E.	Tappi 54(5): 699-703. May 1971.
*NSSC mills can operate independently using mixed magnesium-ammonia bases.	Sanyer, N. & Keller, E. L.	Tappi 54(3): 381-385. Mar. 1971.
Measuring linerboard thickness and flute height of corrugated fiberboard.	Koning, J. W., Jr.	Tappi 54(2): 236-238. Feb. 1971.
Bark and its possible uses.	Harkin, J. M. & Rowe, J. W.	U.S. Forest Serv. Res. Note FPL-091. 1971.
Wood, pulp, and paper and people in the Northwest.	Hall, J. A.	PNW Forest & Range Exp. Sta. Forest Serv. U.S. Dep. of Agr. Portland, Oreg. 1970.
Corrugating furnishes and mediums; their microscopy, sheet properties, and runnability.	Simmonds, F.	Paperboard Packaging: 1970.
*Directional permeability of softwoods.	Comstock, G. L.	Wood and Fiber 1(4): 283-289. Winter 1970.
Rapid determination of the number of fibers per gram of pulp.	Horn, R. A. & Coens, C. L.	Tappi 53(11): 2120- 2123. Nov. 1970.
*Determining interfiber bonding by electrical conductivity.	Smith, W. E.	Tappi 53(10): 1944-1947. Oct. 1970.
*Fiber orientation and degree of restraint during drying effect on tensile anisotropy of paper handsheets.	Setterholm, V. & Kuenzi, E. W.	Tappi 53(10): 1915-1920. Oct. 1970.
*Butt swells of water tupelo for pulp and paper.	Laundrie, J. F. & & McKnight, J. S.	U.S. Forest Serv. Res. Pap. FPL 119. 1969.

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Title	Author	Publication and date
Uses for sawdust, shavings, and waste chips.	Harkin, J. M.	U.S. Forest Serv. Res. Note FPL-0208. 1969.
Lignin and its uses.	Harkin, J. M.	U.S. Forest Serv. Res. Note FPL-0206. 1969.
Increased wood fiber recycling: A must.	Carr, W. F., & Horn, R. A.	Forest Prod. Lab., Madison, Wis. 1969.
*Alkaline stability of gluconic acid, cellobionic acid, and cellobiitol.	Minor, J. L., Kihle, L. E., & Sanyer, N.	Tappi 52(11): 2178-2181. Nov. 1969.
*How to reduce vessel element picking in printing papers containing oak.	Byrd, V. L. & Fahey, D. J.	Pap. Trade J. Nov. 24, 1969.
*Water-induced recrystallization of cellulose.	Caulfield, D. F. & Steffes, R. O.	Tappi 52(7): 1361-1366. July 1969.
*Is caustic soda suitable for buffering NSSC digestions?	Keller, E. L.	So. Pulp & Pap. Manufacturer. May 1969.
*Swelling of prehydrolysis-kraft pulp fibers in cadmium ethylenediamine.	Simmonds, F. A.	Tappi 52(5): 933-938. May 1969.
*Effect of stock consistence during refining on pulp and paper properties.	Byrd, V. L.	Indian Pulp & Pap. 23: 365-375. Dec. 1968.
*Progress and prospects of polysulfide pulping.	Sanyer, N.	Tappi 51(8): 48A-51A. Aug. 1968.
Fiber for tomorrow's requirement.	Chidester, G. H.	Tappi 51(8): 46A-47A. Aug. 1968.
*Application of chemicals to wet webs of paper and liner-board using the smoothing press.	Fahey, D. J.	Indian Pulp & Pap.: 87-92. July 1968.
*Sodium sulfite recovery by direct oxidation of smelt.	Rice, J. W. & Sanyer, N.	Tappi 51(7): 321-327. July 1968.

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Title	Author	Publication and date
*Method for measuring edgewise shear properties of paper.	:Setterholm, V. C., :Benson, R., & :Kuenzi, E. W.	:Tappi 51(5): 196-202. :May 1968.
*Production of phenols by cooking kraft lignin in alkaline solutions.	:Clark, I. T. & :Green, J.	:Tappi 51(1): 44-48. :Jan. 1968.
*Microscopical and other fiber characteristics of high-yield sodium bisulfite pulps from balsam fir.	:Horn, R. A. & :Simmonds, F. A.	:Tappi 51(1): 67A-73A. :Jan. 1968.
*Kraft pulping of digger and knobcone pine.	:Laundrie, J. F.	:U.S. Forest Serv. Res. :Note FPL-0181. 1967.
*Magnesium bisulfite pulping and papermaking with southern pine.	:Keller, E. L. & :Fahey, D. J.	:U.S. Forest Serv. Res. :Pap. FPL 78. 1967.
How refining of vessel elements affects off-set printing papers.	:Byrd, V., Horn, R. :& Fahey, D. J.	:Pap. Trade J. 151(46): :55-60. Nov. 1967.
Improvements in cylinder board from inter-ply chemical additions.	:Fahey, D. J.	:Pap. Trade J. 151(34): :36-39. Aug. 21, 1967.
Suitability of Rocky Mountain species for manufacture of pulp and paper.	:Hyttinen, A.	:Proc. Rocky Mountain :Forest Ind. Conf., Mar. :21-22, 1967, pp. 57-64, :Colorado State Univ., :Fort Collins, Colo.
A review of methods for estimating harmful pitch in wood pulps.	:Simmonds, F. A.	:U.S. Forest Serv. Res. :Note FPL-0156. 1967.
Outside storage of pulpwood chips--a review and bibliography.	:Hajny, G. J.	:Tappi 49(10): 97A- :105A. Oct. 1966.
Suitability of Appalachian woods for sanitary tissue and toweling.	:Forest Products :Laboratory	:U.S. Forest Serv. Res. :Pap. FPL 66. 1966.

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Title	Author	Publication and date
Fiber characteristics and paper quality from southern pine.	Chidester, G. H.	Tech. Pap. of the Amer. Pulpwood Assoc.: 22-24. July 1966.
How expander rolls widen and improve sheet properties.	Chilson, W. A.	Amer. Pap. Ind. Mar. 1966.
How surface applications of starch affect hardwood-softwood papers.	Chilson, W. A. & Fahey, D. J.	Amer. Pap. Ind. Mar. 1966.
Future demand creates new market for the paper industry.	Setterholm, V. C.	Tech. Pap. of the Amer. Pulpwood Assoc.: 14-16. Jan. 1966.
*Drying restraint. Its effect on the tensile properties of 15 different pulps.	Setterholm, V. C. & Chilson, W. A.	Tappi 48(11): 634-640. Nov. 1965.
*Phenolic resin treatment improves fiberboard compressive strength.	Koning, J. W., Jr. & Fahey, D. J.	Package Eng. 10(10): 130-139. Oct. 1965.
The present and future use of hardwood for pulp, paper.	Sanyer, N.	Tech. Pap. of the Amer. Pulpwood Assoc.: 20-23. Apr. 1965.
The future for pulp and paper.	Chidester, G. H.	Forest Prod. J. 14(5): 232-234. May 1964.
*Chemical treatments for improving compressive strength of linerboard at high moisture conditions.	Fahey, D. J.	U.S. Forest Serv. Res. Note FPL-084. 1964.
*Two-stage nonchlorination bleaching of several hardwood neutral sulfite semichemical pulps.	Simmonds, F. A. & Hyttinen, A.	U.S. Forest Serv. Res. Note FPL-043. 1964.
Uses for slabs, edgings, and trims.	Forest Products Laboratory	U.S. Forest Serv. Res. Note FPL-038. 1964.
Pulp yields for various processes and wood species.	Forest Products Laboratory	U.S. Forest Serv. Res. Note FPL-031. 1964.

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Title	Author	Publication and date
Methods used at the FPL for preparing cross sections of paper and paperboard.	:Horn R. A. & Ellickson, S. C.	:U.S. Forest Serv. Res. Note FPL-022. 1964.
*Method for determining the average specific filtration resistance of pulps at constant pressure.	:Gertejejen, R. O.	:Tappi 47(1): 19-21. Jan. 1964.

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